MAKING WATER POLICY AND WATER LAWS DEMOCRATIC: LESSONS FROM SOUTH INDIAN STATES

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Abstract

The present attempt is to propose local people's involvement in Water Policy and Water Law formulation in Indian sub continent on the growing realization that policies and laws the state governments have so far either visualized or implemented seems remain paper tigers. It examines the existing water laws and its implementation from 3 south Indian states viz., Kerala, Karnataka and Tamil Nadu for this purpose. Analysis shows that Water laws mainly are centred on participatory irrigation management and water user associations. Groundwater laws are given lowest emphasis by the state governments where as majority of the Indian population depends upon it especially for domestic use. Indiscriminate sand mining is seen an emerging threat for river hydrological system that has accentuated by income tax rebates and gaps of housing policies. It indicates that the entire process of evolving water policy and laws is devoid of its stakeholders' participation particularly from the grassroots level. Institutional framework to facilitate local people's participation like Gram Sabha and Panchayati Raj Institutions are grossly underutilised for this purpose. On this background it examines the recent attempt of Kerala government in facilitating stakeholders' participation in law formulation in water related Bill, called The Kerala Conservation of Paddy Fields and Wetlands Bill 2007.

1. INTRODUCTION

Policies and institutions in the water sector respond indifferently to sustainable water use in many Indian states. Often institutions backed with law and regulations follow a fragmented sectoral and supply side approach. They seem centralized in nature, top-down in approach and vague in planning water development, water allocation and management either at higher echelons or at grassroots level (Kumar, 2001). Such vacuums in water institutions and lack of coordination in water administration calls for people's water policies and water laws which have not been tried out in India. In this backdrop the present paper attempts to examine the existing water laws and its implementation from three south Indian states viz., Kerala, Karnataka and Tamil Nadu and suggests recommendations for policy adoption by state and national level government planning agencies towards democratizing the process of water policies and laws.

2. THE CONCEPT

Water Policy is a blue print of a nation state with the broader goal of water resources management and development. This may lead the state towards water welfare or water security and it paves the ways for water law making. The water policy has to be supported by water laws and associated sector laws such as ground-water laws or laws of natural resources extraction and replenishments. The water policies can be created by a political entity like a nation state or a political party and economic activity such as a production unit or firm at their respective levels. This can also be made by social entity of people's groups or a family or farmer depending upon whether the actions taken affect others or not. Whereas making water laws and associated laws is the sole function of a nation state, this functional role distinction differentiates a water law from water policy. Generally, action plans will follow water policy and water laws, to implement the same at the practical level. Thus, the policy, the law, the institution of implementation, the plan and programme of action and actual implementation

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in a sequence, complete the picture of the system of governance, in an ideal situation (Ramesh, 2001). Policy is broader in dimension whereas water laws are specific to the subjects. Sometimes orders of senior government officials also can have the resemblance of law with or without the back up of law and policy.

3. LAW AND POLICY-MAKING PROCESSES

Normally a law is the mother of a felt need, inadequacy or vacuum in the existing situations that cause problems to society. Legal solutions may emerge after a process of consultation and consensus among the affected community. The government in such situation aware of the problem may dictate to solve such issues through legal means conforming to the constitution of a nation. How long consultative process will take and with whom it takes place is of importance. Whether the affected people at large are consulted during the process of law making deserves particular attention in democratic nation like India, especially with ground water laws since major population in the country depends mainly on groundwater for drinking purpose.

In India water laws were initiated before Water Policy of 1987. Water (Prevention and Control of Pollution) Act, 1974 and The Water (Cess) Act, 1977 are only a few examples of putting cart before the horse. At times, inspirations from the west have contributed to water laws in India. Water (Prevention and Control of Pollution) Act, 1974 was a modified version of a Scottish law of 1950s without acknowledgements which the Scott repealed in 1973. Indian law makers however clothed it with tri-colour and resurrected it. Legislative effort of water sector are inter related with other sectors such as agriculture, power, credit, land and environment at large yet consultative and coordinated efforts are not made with other sectors or ministries before formulating a policy and laws. And there are policies without law and laws without policies in the related sectors. Often these processes are not transparent and open. The process of policy and law formulation hardly seeks opinion, critiques and comments but adopt highly secret and confidential cabinet note mode until it is presented in the legislative floor. Obviously they are bureaucratic product models and designs. And law experts get less significant role in giving opinions. Occasionally there is consultations of bureaucracy with the law experts before making laws which gives the impression that the comments of the law experts are well taken. Instances of such enthusiastic consultation process with law experts have met with rejections in the actual bill presented in the legislature even when the comments were given in writing. It seems entire process of evolving policy and law in the subject of environment, in the Indian sub continent is a flawed one (Ramesh, 2001). This dismal picture validates the process of policy and law making. Required consultations, appointment of experts, formation of select committees and duration of the process remain without a standardised procedure followed through a transparent, democratic and holistic approach.

3.1 Emerging Queries

This raises the crucial questions of "who prepares the water policies and water laws of state and how democratic are they? Is it still a bureaucratic exercise? How the farmers' and users' views are incorporated in the water policy? If it has taken note of the above section, how far their views are represented in the water law making? Further, it is worth studying how these are implemented? Is there any conformity between National Water Policy and state water policies? Or in other words does water policy of a state contain the inevitable constituents such as water resources planning, water conservation, judicious use, recycling, pollution control, river management, IWRM, gender, positive discrimination or reservations, water quality, groundwater extraction and recharges, governance, justice, awareness and education? If yes, what is their application at the field level and what is the success or failure rate? What are the supportive acts and policies related to water sector in place in the state? And what is their status in practice? Does any political party have political stands on water and related policies in any state? Are the water acts and policies communicated to common people through audio and visual media? Is the water policy document in the form of a printed book or government order? What is the language in which it has been prepared? Is it accessible and readily available from market to read for the common person? More over, what are the structural gaps and functional gaps of water laws in states? Hence a plethora of research questions arise while deal about water policy and water law making.

Shah (2002) who was one of the members of National Consultative Committee on water, to incorporate the views of voluntary sector on water policy 2002 says, "none of the final recommendations made by this committee find a place in the new water policy". Further, this committee had recommended "Since all water resources have a common property character, private sector participation in planning, development and management of water resource projects, must be subjected to careful social scrutiny, based on well-developed mechanisms of accountability and regulation." It makes many other suggestions, which were rejected by the government. It seems either private sector had enough interest to lobby the bureaucracy or it could be the apathetic view of bureaucracy to include the views of common people.

People's participation in the development planning process from the grassroots level is the key to democratic pattern of development in the country. 73rd and 74th Indian Constitutional Amendments empowering rural and urban local governments popularly called as Panchayati Raj Institutions (PRIs) and Nagarapalika Institutions respectively, is an opportunity opened for ensuring local people's involvement in water policy and law formulations. Hence, they can play a significant role in the water policy and law making to take up the upcoming hydrological and social challenges (Maria Saleth, 1996 and Philip Cullet, 2006). Thus challenges of including under privileged groups in the society and women in the water policy and law formulation process can be in favour of water poor and needy. In other words, all stakeholders - stake-losers and stake gainers - can take part in the total process. The existence of grassroots level institutions like gram sabha facilitate all citizens of the country to take part not only in planning process but also debate and direct the higher tiers of people's bodies whether it is PRIs or state legislatives in the formulation of water policies and laws in India. However, the idea has not been tried out so far in the Indian water context.

Ancient kingdoms and civilizations had water policies and laws in the form of unwritten constitution or mutual consensus among people including in the Indian contexts (Vani, 1991). The British Indian colonial periods brought out Famine Commissions and Irrigation Commissions which were the seeds of water policy by the British empire. However, independent India took nearly four decades to formulate a national water policy. As mentioned earlier, the associated sector policies of agriculture, irrigation and forest etc were the forerunners of the water policy. India's first national water policy was in 1987 though few water laws had been promulgated in 1950s and 1970s such as The Inter-State River Water Dispute Act-1956, The Water (Prevention and Control of Pollution) Rules 1974, Water (Prevention and Control of Pollution) Cess Rules, 1978.

The realization of the fact that water is one of the most crucial elements in development planning, the country had to prepare itself for water challenges while it entered the 21st century. Common issues emerged in irrigation projects across the nation like environmental protection, rehabilitation of project-affected people and livestock, public health consequences of water pollution and dam safety. This inspired national planners to shape a National Water Resources Council in 1983. The council lay down a National Water Policy and reviewed it from time to time. The Council in its meeting held in September 1987, adopted first National Water Policy. However, various untouched issues and areas of the 1987 policy anchored for a newer policy by 1998. Since then number of problems and issues emerged in the development and management of water resources that led to the National Water Policy of 2002. It looks this 2002 policy is a white washed policy of the former policies. According to Iyer (2002) "the revision of the National Water Policy was wholly internal governmental exercise, with no consultations with people and institutions outside. Further, it was a mere 'amendment' exercise, and the resulting document can hardly be described as a new policy.

A study conducted by IWMI (2006) about water governance in Mekong region tells that top-down state policies based on blueprints are widely applied in a one-size-fits-all approach, without taking local realities into account. Water planning is still largely expert-driven, and focused on procedures and targets. There is little room for decision-making that is based on negotiations between users, line agencies, NGOs and politicians. The study was conducted in 6 Mekong countries of China, Laos, Thailand, Vietnam, Myanmar and Cambodia that give tips of driving forces behind the water policies of different types. Often these policies have adopted Bank driven approach with funding from Asian Development Bank. They move around with the buzz words or modern principles such as, participation, water charges, IWRM, control on water uses and multi-level body decision making. Water policy making at functional level often remains without public scrutiny and in secrecy. For example, there is little scope for the democratic approach of water policy making in China and Laos since

they are not allowed to. The strong resistance from bureaucracy also stands against popular water policy making as it happened in Thailand. The study says that Thailand and Cambodia have drafted new legislation. Myanmar still has to update its older water laws. Vietnam, China, and Laos have passed new laws in recent years. Invariably, civil society has had no input in the creation of their water laws. Often water sector reforms are largely designed by Bank consultants outside the country that may undermine or override the traditional norms, rights and rules. Sainath (2006) observes that multi national corporations influence water policy making of Latin American countries. The paper says Maharasthra Water Resources Regulatory Authority 2005 is based on a World Bank mooted water law passed in haste through Maharashtra state assembly to get sanction for a billion dollar project in the state[2].

Once the Water Policy of state is promulgated, enabling laws are to be created by the state. The related water laws are generally implemented through people's multi-level bodies, Water User Organisations, legal and regulatory frameworks, for instance, Maharashtra Water Resources Regulatory Authority and Dam Safety Authority Kerala acts. Sometimes they are implemented by a government order of a concerned senior bureaucrat. Quite often they have no role in water resources planning, allocation and regulation. Command Area Development Authorities of different states had such farmer organizations for nominal sake (Maloney and Raju, 1994). Thus it is most important to study the water policies and water laws which are actually put under operation at field level.

Why the acts are not implemented at the grassroots is indeed pertinent. There are varied references of the wide gaps in the implementation of water laws. Some water laws may be conceptually good but difficult to implement. Such law formulation could be based on the views of people's political representative party in the state assembly and not necessarily reflect the views of local population. Such hasty laws may undermine the traditional water consensus and rights of local population. Alternatively, water law prepared by a political regime may not be acceptable to the next ruling regime. Interdisciplinary approach in law formulation may be the missing link for practical application of water laws at the field level. Often limited publicity about a water law may make the people unaware about the particular law. In some others cases, existing water laws might be outdated, inadequate and inappropriate. Political willingness to implement the law is vital. Rainwater harvesting and ground water recharge activities taken up by Jayalalitha government in Tamil Nadu in the recent years is one such example. Political regimes may find it difficult to implement water laws due to various pressures, votes and possible economic losses. Indiscriminate sand mining from Kerala Rivers is an example of the power of local mafia over existing law and order enforcement system of the Kerala Protection of River Banks and Regulation of Removal Sand Act 2001.

There are major hurdles from the bureaucracy in implementing water laws at the operational level. Some bureaucracy is not receptive to change in the water related sectors. In the institutional frameworks to implement the water laws, the bureaucracy is ill equipped, inadequate in number, under trained and often with low morale. Some staff may not have any water subject orientation. Fund flow from the state headquarters to the water institutions may be slow. Competent water oriented staff on contract may find it difficult to work with the government officers on deputation. Also problems like accumulation of staff in the apex level institutions and lower allotment of staff in the lower tiers can be seen in water development projects. There may be difficulty in identifying suitable NGOs to work with water sector.

Projects under water sector reforms use to be implemented in time bound project manner or on pilot basis while the participatory learning process is time consuming. Social development is a gradual process particularly in the developing country context that may take more time. Therefore, experiments in water sector development cannot be written off even after the project periods ends, or once the donor aid is off.

Finally, every state water policy talks about promoting economically efficient use of water; but no one is ready to price canal water or meter electricity used for pumping groundwater. Also, the some state water policy documents talk about using river basin as the unit for planning WRD& M. But, no one has so far made any progress. Planning and implementation activities are carried out in isolation by different wings of irrigation department.

[2] As per this act those farmers have more than two children will have to pay one and half times new rates for irrigation.

From the above discussions, it can be seen that there are plenty of problems and issues with water policy and water act formulation and implementation. The gap between water laws and operational flaws of these acts in different states opens the scope for water policy research. To address these issues field studies were conducted in three south Indian states viz. Tamil Nadu, Karnataka and Kerala in order to understand and reflect upon the contradictions (if any) with respect to formulation of water policies, laws and its implementation at the grass roots level. Closer interactions held with the multiple stakeholders ranging from irrigation department officials at the various levels to farmers, water users, local community leaders, NGOs and resource persons in the subject, to understand the bottlenecks in implementing policies and acts.

4. WATER POLICIES AND LAWS IN KARNATAKA, TAMIL NADU AND KERALA

Water Policies and Laws of Kerala, Tamil Nadu and Karnataka are studied in pursuit of democratic dimensions of water policy and law applications at the ground level. Field investigations and data shows that these states have embarked upon water policies at one point of time or other. Tamil Nadu formulated water policy in 1994 in response with National Water Policy 1987 and lag behind the other 2 states in updating the same in continuation with National Water Policy of 2002. Karnataka and Kerala issued their water policy in the year of 2002 after the national policy. Karnataka also has a water policy for Urban Drinking Water and Sanitation 2002.

Field insights give the impression that water policy formulations is a contribution of bureaucracy and some technical experts. Indeed the minister in charge of water might have gone through the policy document. Inter disciplinary or participatory approaches were less or nil obviously in the water policy formulations in the case states. Hence stakeholders' involvement in formulation was not very democratic in approach. States can have water policies as and when they require on which people are less concerned than the water laws. Again there too experts and bureaucracy dominates and the draft water bills get passed in the state legislature, truly people's representatives' body than local people. However, a convincing change in favour of water policy and water law formulation took place in Kerala from the present rule of LDF at state legislative assembly since 2005. Kerala's all new water policy drafted in 2006 by Centre for Water Resources Development Management (CWRDM), Calicut, which is the state owned water research agency. This had been discussed by NGOs (partially left centred) and sought for meticulous modifications. It has a select committee of experts to learn people's views. The final draft version of this water policy which has to be termed the year 2008, is available from website that seeks public opinion. The policy is under debate for the past two years[3]. In the same manner, new water related law of the state is in draft stages with wider democratic consultation process across state which will be discussed in the later part of the paper. But what is more important is how these water policies led to suitable water laws considering particular situations of states in context and how the enacted laws are implemented at ground level in its fuller spirit and meaning. And therefore it is worth assessing important water acts briefly which have been formulated and enacted across these states (see Table 1).

In the irrigation scenario Karnataka has updated their irrigation act of 1957 to The Karnataka Irrigation and Certain Other Law (Amendment) Act 2000. Tamil Nadu emphasizing more upon farmers, Water User Associations (WUAs) and PIM enacted Tamil Nadu Farmers' Management of Irrigation Systems Act, 2000. Three years later Kerala, which spends nearly 60% of its budget on irrigation and hydro power with low agriculture output, enacted The Kerala Irrigation and Water Conservation Act 2003. The act claims that all water resources belong to the state and is a common property resource. It is silent however, on conservation of water resources particularly the homestead open dug wells of Kerala. Indeed irrigation components, dam safety authority and limited PIM introduction in the state are a reflection of this act.

WUAs, which involve local people in water distribution and uses in the irrigation and domestic water sector have become relevant in the past few decades and attracted a lot of donor support. Byelaws, constituent people's water general bodies, water charges of the past history with which they managed their own unwritten constitutions, mutual respect and value systems for water management were lesser known to the traditional

[3] No doubt all these documents of water policy are available in the website in English than in any easily available outlets down to the district levels in local language. Tamil Nadu water policy of 1994 is still not available even from websites.

irrigation social capitals (Ostrom, 1992, Uphoff,1991). In Karnataka and Tamil Nadu, grassroots level WUAs are in place under each reservoir related projects and under the traditional tanks systems. Initial enthusiasm does always remain though. Follow up and monitoring from the higher level is a missing component in both states. Formation of distributaries level WUA committees, project level committees or federations and Apex level committees has not been done in all the areas particularly in Tamil Nadu and southern parts of Karnataka. Project level federations have been formed by NGOs such as Jalaspandana in the north such as Ghata Prabha and Mala prabha sites. It looks that there is no one to co-ordinate these WUAs at any level. Organising the farmers is the most vital component of PIM which is lacking in both the states.

The field information from case states shows that irrigation field structure of command area development schemes of 1980s are dilapidated, as are their canal committees. It is learnt from the discussions with the survey respondents that some WUAs perform well whereas others do not work as envisaged due to various reasons such as leadership qualities, caste and political party homogeneities, monsoon etc. Some of them may work as long as the project implementing agency or NGOs support them and once this is over WUAs often work passively.

Table 1: Water Policies and Water Laws in the Case States

Policy/ Law	Karnataka	Tamil Nadu	Kerala
Water Policy	2002 and 2003 (urban drinking water and sanitation)	1994	1992, 2002 and 2008 to be declared shortly
Irrigation	The Karnataka Irrigation And Certain Other Law (Amendment) Act, 2000	Tamil Nadu Farmers' Management of Irrigation Systems Act, 2000	Kerala Irrigation & Water Conservation Act, 2003
Ground Water	1) The Karnataka Ground Water (Regulation for Protection of Sources of Drinking Water) Act, 1999 2) The Karnataka Ground Water (Regulation and Control) Bill, 1996	1) The Tamil Nadu Groundwater (Development and Management) Act 2003 (not implemented) 2) The Chennai Metropolitan Area Groundwater (Regulation) 1987	Kerala Ground Water (Control and Regulation) Act, 2002
Domestic Water	Karnataka Municipal Corporations (Water supply Rules 2004)	Tamil Nadu Water Supply and Drainage Board Act, 1970	Kerala Water Supply and Sewerage Act, 1986
Rain Water Harvesting (Rooftop)	Attached with Building Byelaws of Harvesting Municipal Corporation	Amendments with Laws of Municipality and PRIs	Attached with Building Rules of Municipality and PRIs
River Protection (Rooftop)		Tamil Nadu Minor Mineral Concession Rules, 1959	Kerala Protection of River Banks and Regulation of Removal Sand Act, 2001
CADA	Karnataka Command Area Act, 1980		Kerala Command Area Act, 1986
Other Laws		Tamil Nadu Protection of Tanks and Eviction of Encroachment Act, 2007	Kerala Conservation of Paddy Fields and Wetlands Bill, 2007

Field insights show that the Revenue Department, which has to support WUAs in providing land records for assessing the crop yield, fixing water rates and settling CADA disputes, is slow in action. Settling disputes is a hurdle when WUAs approach the Police department[4]. Some WUAs feel that the training given to them is not very intensive. There is lack of coordination among the departments because of which WUAs loose out.

Karnataka WUAs are registered under Cooperative Societies Act though they find it difficult to work in like a company. Whereas in Tamil Nadu, WUAs are elected constituent bodies that do not require any renewal of registration. This leaves scope for mal adjustments in Tamil Nadu though some WUAs find it convenient. They hold that WUAs in Tamil Nadu are not empowered to settle disputes and often have to approach administrative hierarchy and District Administration to settle issues and for development related requirements, which is time consuming and tedious. Problems with WUAs are often site specific which requires micro level treatments that may not be possible because of bureaucratic inflexibilities. In Kerala, Paddy Farmers' Associations popularly known as "Padasekhara Samithies" and Krishi Bhavan (micro level government agriculture office) comes under a grama panchayat in the absence of proper water user association.

In terms of ground water laws - Kerala was the first to implement them. The Kerala Ground Water (Control and Regulation) Act 2002 was implemented and Ground Water Authority (previously called ground water department) was established. It constitutes a governing body with 13 members and a chairman. Secretary to Government Water Resources is the chairman and director of groundwater department is the secretary. Chairman and secretary of this people's committee are from bureaucracy and rest of the governing body members are people's representatives. No democratic norms or specified qualifications have been suggested to this nominated people's body. Indeed, it gives ample scope for "putting party political activist first" to this committee. Much acclaimed Plachimada Coco Cola factory issues of groundwater exploitation versus Perumatty Grama Panchayat, Palghat district, Kerala is no doubt attributed to the weak content of the law. (Koonan, 2007, Bijoy, 2006) As per this Act, well owners were requested to register HP specifications in the district groundwater departments[5]. It evoked little response in the initial years due to limited publicity but improved with wider newspaper coverage, deadlines and fine structure. In Karnataka, groundwater law for irrigation is still in the form of a bill since 1996. Nevertheless, The Karnataka Ground Water (Regulation for Protection of Sources of Drinking Water) Act, 1999 calls for attention of well diggers not to construct wells closer to the public drinking water sources of the government schemes. The Tamil Nadu Groundwater (Development and Management) Act 2003 is more far sighted since the former issues license for drilling units. However, they have not yet implemented the same because of resistance from various corners. Due to acute water scarcity in Tamil Nadu the residents of Chennai implemented The Chennai Metropolitan Area Groundwater (Regulation) Act 1987 in 1987.

Considering the water over draft situation in all three states, rainwater harvesting particularly roof water harvesting has emerged as a new approach in cities particularly in Chennai. Even though Tamil Nadu has not produced a water policy after 1994, the state has vehemently implemented water recharge components mixed with amendments as rules of municipality, municipal corporations and PRIs in 2003. Coupled with good rainfall during the past two years, Tamil Nadu to a considerable extent is successful in improving the water situation with the help of rainwater harvesting. However, the methods used and how genuinely they were implemented needs research. Observation from rural farmers is that roof water harvesting for groundwater recharge may not be useful as visualized. Implementation of such stringent rules for rain water harvesting are an exception for water law implementation in the recent history of south Indian states. However, these recharge efforts may be insignificant in the absence of the required ground water extraction laws in rural areas. Following the steps of Tamil Nadu, Kerala amended the building rules of urban local governments in 2004 and for rural areas in 2007 in favour of roof water harvesting. Field studies however show that it has raised issues of corruption matching numbers. In the absence of standard norms in rooftop harvesting structures, newly built houses and structures cannot get building number. The state thus assigned a building number when the house

[4] According to WUAs the Police are not involved with these activities as they have not received any order from government in Tamil Nadu

[5] Act that requires the open dug well owners who make use electric motor pump with more than 1.5 HP and tube well owners with above 3 HP to register their wells in the District Ground Water office concerned.

is constructed. Bangalore Mahanagarapalika Building Byelaws mandates rainwater harvesting for new buildings based on plinth area. Panchayati Raj and Rural Development department of the state are also piloting rainwater harvesting in the rural areas.

National government's effort for establishing CADA across states has contributed to the enactment of CADA acts in the three states. Other related water laws exist in Tamil Nadu and Kerala related to the protection of water bodies viz. tanks, rivers and wetlands. The Tamil Nadu Protection of Tanks and Eviction of Encroachment Act, which became effective in October 2007 aims to prevent illegal encroachment of the tank sites. Complaints from different corners arise that it is anti-poor. However, the intention of such laws for protection of natural resources deserve attention. Donor aid is also flowing in for this reason in Tamil Nadu and Karnataka.

Regarding water administration, no coordination for any water resources planning and management occurs either at the bottom or at top level in the three states as well as in studies from other states. Piecemeal approach to water development is quite common (Kumar, 2001). Different water sector related development departments plan and implement their own schemes. Officialdom of water administration is spread across departments as usual except for certain donor aided projects with multi disciplinary projects in the case states.[6]

5. REASONS BEHIND THE NON IMPLIMENTATION OF ACTS

Groundwater laws lag behind in enactment and its implementation. National Water Policy emphasises more on surface water and attaches little attention on groundwater withdrawal though nearly 90% of the drinking water needs in the country are met mainly by groundwater (Nagraj 2007). The Karnataka Ground Water (Regulation and Control) Bill 1996 is long pending for more than a decade that could not be enacted in the legislative assembly which shows the apathy of state in conserving the groundwater resources of the state. The Bill is meticulous on grant of permit to extract and use groundwater. Reasons for non enactment are many. A Groundwater law will badly affect the sinking agencies to get licences and to conduct their unchecked operations. A similar reason is in force in Tamil Nadu where farmers are reluctant to loose their right to harvest the groundwater from the land portion belonging to them. When the law becomes against the common understanding of right to dig a tube well and to draw water from it, public feeling normally will be against such law and the precious votes of elected representatives. It is essential to make the people aware of the rules in favour of appropriating groundwater as common property resources optimally in the society. Such water education is absent in all National Water Policies.

Given the poor literacy rate in India, law application and its acceptance in the society is a gradual social development process that takes more time than in the developed countries perhaps. If at all a restrictive law is implemented in any state, such as the groundwater extraction and patrolling, it is a difficult task for the government. The problem is aggravated because of the highly subsidised power supply for groundwater irrigation. Also irrigation administration is hesitant to give out their powers to the farmers.

Irrigation Acts have been implemented in all three states. However, follow up and monitoring of the implementation of the law depends upon Irrigation Administration of these states. It is better to term them as acts for participatory irrigation management. Accountability of the irrigation agencies with regard to water delivery to WUAs in government managed irrigation systems is essential for successful irrigation management transfer and these feature should be reflected in the law (Raju, 2004). All problems commonly found with PIM approaches are applicable to the irrigation laws of these states. As long as the irrigation administration is passive in organising, monitoring and supporting the WUAs or farmer organisations, there can't be much change in irrigation management. WUAs of the case states are not empowered fully to become financially sustainable. Political will to support the farmers and WUAs is essential but missing in most cases. Change of governments in the state legislative assemblies or sometimes presidential rule as in Karnataka gives less scope for required support from the apex level. The fall of River Boards of Tamil Nadu substantiates this fact.[7] The PRIs also work

[6] Instances of deputing Chief Engineers of Building Organisation (PWD) to Water Resources Organisation both come under same PWD of Tamil Nadu who may not know much about water as part of their inter departmental transfers and convenience factor of officialdom to be seated at state headquarters is common.

together at the grassroots level with WUAs in the case states when NGOs supports them. (Shivanna and Reddy, 2006) Major donor aid agencies too give less importance to push such notion of blending PRIs and PIM in water sector reforms.

Common public ignorance on enacted water laws down to the grassroots level is a major vacuum in the implementation of water law in Kerala. Public awareness on The Kerala Irrigation and Water Conservation Act 2003 was almost zero even amongst the media who ignored the component of conserving open dug wells. If this is the case of literate Kerala, it is assumable how far a water law is disseminated to a common farmer in the rural areas of Karnataka and Tamil Nadu. Website information does not help the poor farmer to learn about water laws. Availing information on water laws published in local language for reasonable price "in time" remain a dream even for scientists work upon the subject, let alone the local farmers. In Chhattisgarh, the strategy of giving awareness to the public on Participatory Irrigation Management Act of Chhattisgarh, 2006 on various modes is an exceptional example of giving mass education on a water law in the country. It can be replicated in other states.

Illegal and unchecked sand mining activities across the states can be observed even after the implementation of regulatory law against sand mining. This is mainly worked out with the help of sand mafia, unholy nexus of people's representatives and administrative mechanisms and by the help of local wage earners residing near the river beds. Unless a suitable alternative is found for sand for construction, implementation of law may not always be successful. Sometimes stringent implementation of a law in time stipulated manner can jeopardise the water law implementation as happened with Tamil Nadu roof water harvesting rules during 2003. Groundwater recharge experts overnight installed roof water harvesting structures across the state to escape penalisation that helped little in ground water recharge according to the study finding by Rain Centre Chennai. (Raghavan, 2005)

Right to harvest rainwater and conserving it with individual farm lands with help of local check dams on individual basis or on farmer collective actions can reduce the water flow to the tank systems and system tanks as seen in Tamil Nadu and Karnataka. Here the rainwater harvester becomes a culprit that makes enough space for controversy particularly in the low rainfall areas of case states except in Kerala. Roof water harvesting laws applied in the rural and urban areas of Tamil Nadu and Kerala which is already weak in implementation either does not contribute much for improving the tank systems than the drinking water resources nearer to the human settlements in villages. Technological boost for digging tube wells makes the farmers less dependent on WUAs and undermines community initiatives. In the absence of required ground water law implementation in Tamil and Karnataka, there is scope for complete dilution of WUAs and collective action.

6. STAKEHOLDERS' PARTICIPATION IN WATER LAW FORMULATION

6.1 The Case of "Kerala Conservation of Paddy Fields and Wetlands Bill 2007"

From the foregone discussion it can be seen that people have a limited role in water policy and water law formulation. This is the biggest bottleneck in enacting and implementing water laws. The governments are afraid of resistance from public in general. Although WUAs and PIM approach is involving interested farmers in the water discourse, their role in policy and law formulations is nil unlike decentralised planning process of rural and urban development in the country. Majority of such projects are imposed from above and many of them are donor aided drawn from somewhere for replication after pilot testing. Institutional framework to reflect the people's view created by the 73rd and 74th constitutional amendments for rural and urban development is thus grossly underused making them (gram sabha) venues of scheme distribution. The following example from Kerala, though not reached the grassroots level and involved local governments, has facilitated stakeholders' participation at the district level in water law formulation

The Kerala Conservation of Paddy Fields and Wetland Bill 2007 intended to conserve the paddy cultivated areas and wetland systems and to restrict the conversion or reclamation thereof in Kerala. It is a state that does not produce even 25% of the total food grain requirement and depends on nearby southern stated for food

[7] World Bank aided River Basin Boards were in existence for two years in Palar and Thambaraparani basins of Tamil Nadu from 2001 to 2003. They remain with a single staff in Chennai.

items. Environment flaw in the local hydrological upset the open dug wells badly particularly in the summer. To avert this growing menace of water and food, the present ruling LDF government brought forth The Kerala Conservation of Paddy land wetland Bill 2007, which is currently debated in the state at public forums.

The bill is relevant in its "water law formulation process" which invites all stakeholders that will be affected when it becomes a law. As part of this process, the state government and revenue department informed the media about holding the district level meetings of all stakeholders were given in the local newspapers with time, place and other details of such public hearing. Since the date and timings of this meeting were circulated well in advance, the venues mainly Town Halls were full with stakeholders on the day set for respective districts. The farmers, farmer unions, clay mining industries, clay mining industrial labour unions, real estate firms, NGOs, social and political activists and public in general gathered in such gatherings and aired their view on the drafted bill. It started from Trichur district where ministers, district collector, people's representatives and other district level bureaucracy were present All who had attended this public hearing were given a copy of the draft bill in Malayalam language with a questionnaire printed in Malayalam seeking pros and cons of such a bill to be submitted within December 31st 2007. This process was repeated in 14 district headquarters. Apart from this, local newspapers had facilitated this discussion at length from stakeholders as well as from the experts in this field. Currently this bill is scheduled to be presented in the ongoing legislative assembly sessions of Kerala government (March '08).

There are apprehensions on type of expert groups who will be vetting the bill after hearing the stakeholders' opinion. Besides who will coordinate the responses of filled up questionnaires and how far it will reflect in the law. Whether the opinions of the stakeholders' have been seriously considered or not, in the redrafted bill is a matter of concern while reformulating and passing the bill in the state assembly. This is a pilot experiment of Kerala in ensuring people's participation in the law formulation process under law reforms after much acclaimed experiments with people's planning campaign in Kerala.

7. RELATED SECTOR INFLUENCES ON WATER SECTOR

Field insights from the case states gives the picture that water sector is related with other sectors such as land, agriculture, power, mining, credit, environment etc. Majority of these related sectors have been discussed earlier by different eminent institutions nationally and internationally. In the Indian context, one among the above sector is seen recently emerged is sand mining. Building construction industry is in very high growth stages in the recent years following the growth rate of the Indian economy. All such activities require sand which is becoming a scarce resource. The impact of sand mining from the rivers and rivulets is the depletion of groundwater level in the nearby inhabited areas of the rivers. State like Kerala has 44 rivers out of which 41 of them are west flowing to sea, cross through thickly populated areas before reaching the sea. Indiscriminate and illegal sand mining is still prevalent even with stringent rules of The Kerala Protection of River Banks and Regulation of Removal Sand Act, 2001. A common and easily available alternative for sand has still not been invented by scientific community. Issuing coupons for rationing to extract sand from rivers has been adopted recently in Kerala. But how the sand mining has adversely affected the state is more interesting to study. Income Tax rebates for newly constructed houses (on loans) for an income tax payer is an attraction to reduce the tax burden. Informal interviews with income tax payers who have constructed new houses in Kerala reveals that a new house or construction modifications helps to reduce the income tax burden though the new construction activity may not be essential. More construction activities require more sand and this has affected the river systems of Kerala and hydrological seepage adversely from their water resources i.e., homestead open dug wells.

This field observation was tested to the Karnataka and Tamil Nadu counterparts and reaches the conclusion that income tax rebate can lead to unnecessary or unwanted construction in availing tax benefit. Both these states suffer from indiscriminate sand mining resulting in damages to the river system including for infrastructures like railway bridges (Hemalatha and Chandrakanth 2003). True that the income tax rebate is indeed is a major relief for those who build a house but when this tax benefit opportunity is misused it calls for

serious concern from the policy makers[8]. Under this circumstance, Housing policies of the country have to be seriously reviewed in the event of growing water scarcity and groundwater overdraft.

8. RECOMMENDATIONS FOR POLICY MAKING

The discussion shows that water policy and water laws are made without consultation with the stakeholders which results in poor results, particularly in the groundwater laws. This leads to appropriation of available water by individuals or societies by whatever means they can causing unsustainable water resources development and managements. Following recommendations are suggested for water policy and law making and planning institutions by state governments with local people's participation. The policy and law making process has to be standardised with necessary consultations, norms of appointing experts and commons, multi disciplinary teams, formation of select committees, duration of the process and other technical intricacies.

Existence of gram sabha/ward sabha in the rural and urban local government scenario provides ample scope for debating water policy and law formulations at the grassroots level. Articulation of these laws indirectly helps teach the masses about the drafted law under debate. District and lower level consultations with people and coordination of concerns and valid arguments from the people have to be sought and properly addressed while vetting water laws. The draft policy and laws should be available, adequate in number, printed in local languages and in English. Hoisting them in websites will not help the poor farmers or the common people.

While promoting water sector reforms and PIM on one side, donor aid agencies also promote decentralisation and rural and urban local governments without any coordination, which raises concerns. Both these people's bodies work like parallel bodies and can work synergistically. The potentials of NGOs can be effectively tapped to coordinate for better water governance at grassroots level. Training for WUAs has to be institutionalised as in the case of PRIs. State level water training institutions have to be fully equipped. Currently this part is not given required attention and remains a major vacuum in the capacity building process.

Once a water law is implemented enough awareness on the law has to be disseminated through all effective means to reach the micro levels. This can lead the masses including the women and underprivileged for hydrological awareness or water education which has not been mentioned in the former water policies.

Consistent interest and political willingness is crucial to establish and monitor the total water resources development, which are often found missing once a political party changes from state legislative assembly.

Water institutions and administration have to be coordinated from bottom to top to facilitate accountability of government officials. It should ensure water resources management and development involving local people.

States like Kerala where irrigation projects based on reservoirs and recurrent expenditures to maintain the system might incur more cost than the return for farmers produce in terms of crop prices. The canon of economy works negatively with irrigation investments and total crop return from a project. There is a serious need to make irrigation institutions and administration more cost effective.

Water sector is very much related with other developments sectors. The field realisation of income tax rules and housing policies and their nexus with water sector raises concern. Fiscal policies and building construction and industrial activities have to be reviewed to avoid indiscriminate sand mining. Scientific research for alternative building material other than sand also has to be considered.

Several government institutions, NGOs and many agencies are involved with water research. And who takes care of their research outputs for policy adoption requires urgent attention. Scientific research has to be result oriented rather than purely academic. State and national planning agencies like State Planning Boards and National Planning Commission should review and call for research output suited to the needs of the state and the country as a whole. If water research and national & state policy planning in India work in parallel without meeting any end, water problems of the country may remain unresolved.

[8] This fiscal policy reforms has roots from the western developed countries particularly from USA when a loan for acquiring a house is taken, its interest will be deducted from the taxable income as per the USA income tax laws.

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REFERENCES

Bijoy, C. R. (2006), Kerala's Plachimada Struggle, Economic and Political Weekly, Oct 14.

Kumar, M. Dinesh (2001), Institutional and Policy Framework for Integrated Water Management in Sabarmati River Basin, INREM Foundation, Anand.

Iyer, Rama. Swamy (2002), The New National Water Policy, *Economic and Political Weekly,* May 4.

IWMI (2006), Water Governance in Mekong Region, Water Policy Briefing, Issue 22.

Maloney, C. Raju, K.V (1994), Managing Irrigation Together, SAGE Publishers, New Delhi

Saleth, Maria R (1996), Water Institutions in India: Economics, Law and Policy; Commonwealth Publishers, New Delhi.

Mihir Shah (2002), Water Policy Blues, The Hindu dated 7th July.

N. Nagaraj; H. Chandrasekhar (2003), Designing Methodologies for evaluation of Economic and Environmental Implications of Ground Water Depletion- A Study in Karnataka, Project Report Submitted to the Indira Gandhi Research Institute of Development Research, Mumbai.

Philip Cullet (2006), Water Law Reforms, International Environmental Law Research Centre Paper, New Delhi.

Raju K. V (2004), The Legal Framework for Water Management and its working in A. Vaidhyanathan and Oudsham (Eds.) Managing Water Scarcity: Experience and Prospects, Manohar Publishers, New Delhi.

Ramesh, M. K (2001), Environmental Justice Delivery in India: in Contexts, Indian Journal of Environmental Law, *Journal of National Law School of India University*, Banglore, Vol.2 No.2

Sainath, P (2002), Privatisation: Come Hell or High Water, *The Hindu,* March 22nd .

Sekhar Raghavan (2005), Survey on Rainwater Harvesting, Rain Centre Working Paper, Chennai.

Sivanna, N (et. al.) (2006), Panchayat and Watershed Developments, Inistitute for Social and Economic Change, Bangalore.

Sujith Koonan (2007), Legal Implications of Plachimada: A Case Study, International Environmental Law Research Centre, New Delhi.

Vani, M. S (1992), Role of Panchayati Raj Institution in Irrigation and Management: Law and Policy in Tamil Nadu and Karnataka, The Indian Law Institute, New Delhi.